

ABOLITES



THE ADAMS-BAGNALL ELECTRIC CO.
CLEVELAND OHIO

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CCA

ABOLITES

Porcelain-Enameled Steel Reflector Equipment

for

Efficient and Economical

INDUSTRIAL LIGHTING



CATALOG 175

JULY 1, 1919

Supersedes All Previous Lists
And Catalog 137-B

THE ADAMS-BAGNALL ELECTRIC CO.

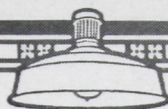
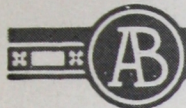
Main Office and Works:

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Abolites for Industrial and Commercial Lighting Service

Value of Correct Illumination

A correct and efficient system of illumination is an economic need for every industrial and commercial establishment. Efficient lighting is recognized as of great importance towards obtaining the following factors in industry:

(a) Improvement in production; obtaining increase in output from each workman and unit in a plant or institution;

(b) Better quality of product because of better work and greater accuracy; less waste of time and spoilage of material;

(c) Decrease in liability both to minor and serious accidents; good illumination under all working conditions and at all hours is recognized as a fundamental in all sound safety plans and "Safety Codes";

(d) Creating more cheerful surroundings and viewpoint that leads to greater satisfaction from the results of each workman or anyone entering the industrial plant; more comfort for the workman and better order and neatness in the plant.

All the above factors reduce the costs of operation. The cost of maintaining a good electric lighting system is very small as compared to the savings in plant operation, in fact, a fraction of one per cent. A correct system is necessary to obtain the best results.

Good Industrial Lighting

These considerations must always be met to have correct artificial illumination:

(a) Provide sufficient light of the right type wherever work is to be done.

(b) Have a moderate intensity of light on the walls and areas adjacent to the work spaces.

(c) For each incandescent lamp unit, provide reflectors that will guide the light in sufficient amount in the right directions, reduce glare and diffuse the light.

(d) Have lighting equipment that is reliable, low in maintenance as well as in operating cost and readily maintained at its original efficiency.

Planning the Lighting Installation

The main considerations in laying out the lighting installation are given briefly in the following. More detailed data can be obtained from the Adams-Bagnall Electric Company. This Company has been a pioneer and producer of industrial and

outdoor electric lighting equipment, for the past twenty-five years. A-B arc lamp equipment has been used all over the world and in every class of industry.

Lamps of the Mazda type are now the best means with which to provide light for most classes of service. But unless the lamps are installed with proper reflecting units, a great deal of the light is wasted; also the lamps of higher candlepower provide light that is glaring and causes sharp shadows unless the light is properly shielded and reflected.

Classes of Lighting

The electric lighting with Mazda lamps may be of the General, Group or Local class.

General lighting applies to overhead lighting that furnishes illumination for the entire workroom space and without special reference to the class of work in any particular section. It aims to distribute light over all of the working planes and provide light sufficient in amount or intensity for any class of work that may be regularly performed. In General lighting, lamps and reflectors are spaced equally and at a uniform mounting height, each unit lighting a square.

In Group lighting, a group of machines or particular space is illuminated by units so placed with reference to the work that the light is obtained from the best direction. The difference from General lighting is chiefly in that more attention is given to the character of the machines and the places where the main operations are performed on the machines, than to the general nature of the work, regardless of location. It is especially adapted for use where large rooms have many machines of the same type.

Local lighting consists of individual lighting for machines or operations and usually supplements General lighting of a low intensity. It is useful where a light of high intensity is needed over a relatively small space, such as on work benches, punch presses, sewing machines, etc. Small reflector units of the bowl or angle type, are the most suitable.

In the majority of cases, general practice is to rely more on sufficient illumination from general lighting than provide additional local lighting. Drop cord lighting should be limited in use and when used, reflectors should always be provided.

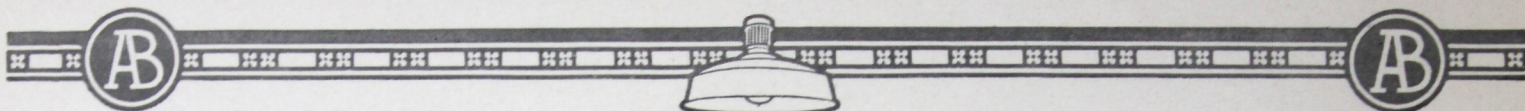
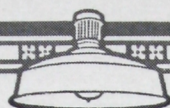


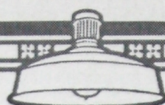
Table No. 1

Industries or Classes of Service	Intensity in Foot Candles		Watts per Sq. Ft.	
			Small Room	Large Room
Armories	2.	to 3.	0.52	0.35
Auditoriums	2.	to 3.	0.52	0.35
Automobile Garages	2.	to 3.	0.52	0.35
Bakeries	3.	to 4.5	0.78	0.5
Billboards	6.	to 8.	.....	.....
Billiard and Pool Rooms				
General	1.5	to 2.	0.45	0.3
Tables	4.5	to 6.	1.45	0.85
Bookbinding				
General assembling and binding operations.....	2.5	to 4.	0.6	0.4
Finer operations, as cutting and punching.....	3.5	to 5.	1.0	0.6
Embossing	5.	to 8.	1.7	0.92
Bowling Alleys				
Alleys, runways, seats.....	1.5	to 2.	0.45	0.3
Pins	3.5	to 5.	1.0	0.6
Box Making; in Wood or Paper.....	2.5	to 4.	0.6	0.4
Candy Making	3.	to 4.5	0.78	0.5
Clothing, Cloaks, Suits, Caps, Making of				
Cutting, hand sewing, pressing.....	5.	to 8.	1.7	0.92
Machine sewing, inspecting.....	8.	to 12.	2.4	1.45
Packing, shipping.....	3.5	to 5.	1.0	0.6
Collar, Shirt and Light Color, Cloth Products				
Machine sewing, inspecting.....	5.	to 8.	1.7	0.92
Cutting, laundering, pressing.....	3.5	to 5.	1.0	0.6
Corridors, Stairways, Elevators, Passages.....	0.5	to 2.	0.35	0.25
Cotton Mills				
Carding, lapping, spinning, slashing, warping, packing.....	2.5	to 4.	0.6	0.4
Drawing in, dyeing, weaving.....	3.5	to 5.	1.0	0.6
Inspecting	8.	to 12.	2.4	1.45
Courts; Handball, Tennis.....	7.	to 9.	2.2	1.3
Depots				
Train sheds, baggage rooms.....	1.5	to 2.	0.45	0.3
Waiting Rooms.....	2.	to 3.	0.52	0.35
Drafting Rooms				
Drawing Tables.....	8.	to 12.	2.4	1.45
Records—general work.....	3.5	to 5.	1.0	0.6
Electrotyping and Electroplating.....	3.5	to 5.	1.0	0.6
Engraving				
Engraving, stippling.....	8.	to 12.	2.4	1.45
Transferring, polishing.....	4.	to 6.	1.4	0.8
Factories—General				
Rough operations, as forge, lumber, tannery.....	2.	to 4.	0.6	0.4
Medium operations, as automatic machines, rough bench work....	3.	to 5.	1.0	0.6
Fine operations, as glove, hat, button making, fine lathe or bench work.....	4.	to 8.	1.65	0.9
Extra fine operations, as jewelry work, typesetting, work on dark textiles.....	7.	and up	2.4	1.45



(Table No. 1 — Continued)

Industries or Classes of Service	Intensity in Foot Candles			Watts per Sq. Ft.	
				Small Room	Large Room
Knitting Mills					
Finishing, knitting, looping, seaming.....	3.5	to	5.	1.0	0.6
Napping, packing, shipping.....	3.	to	4.5	1.4	0.8
Laundries	3.5	to	5.	1.0	0.6
Leather working and manufacturing					
Cutting, sewing, matching.....	4.	to	6.	1.4	0.8
Pressing, inspecting, shipping.....	3.5	to	5.	1.0	0.6
General, tanning.....	2.5	to	4.	0.6	0.4
Machine Shops					
Die making, fine bench work.....	8.	to	12.	2.4	1.45
Assembly, erecting, etc.....	5.	to	8.	1.7	0.92
Automatics, drills, grinders, planers, lathes, bench work	3.5	to	5.	1.0	0.6
Saws and rough assembly.....	2.5	to	4.	0.6	0.4
Markets	3.0	to	4.5	0.78	0.5
Meat Packing Plants.....	2.5	to	4.	0.6	0.4
Office Work, such as typewriting, accounting, etc.....	4.	to	8.	1.65	0.9
Paint Shops					
Fine work, as furniture, design work, etc.....	5.	to	8.	1.7	0.92
Medium work, as signs, metal painting and paint manufacturing..	3.5	to	5.	1.0	0.6
Pottery Making					
Grinding, loading kilns, packing.....	2.5	to	4.	0.6	0.4
Cleaning, coloring, trimming and finer operations	3.5	to	5.	1.0	0.6
Power Houses	2.5	to	4.	0.6	0.4
Printing					
Presses, proofreading, machines, cutting, folding.....	3.5	to	5.	1.0	0.6
Typesetting	5.	to	8.	1.7	0.92
Linotype, monotype.....	8.	to	12.	2.4	1.45
Shoe Manufacturing—Rubber Products					
Bench and machine work, shipping.....	3.5	to	5.	1.0	0.6
Finer operations as cutting, lasting, sorting.....	5.	to	8.	1.7	0.92
Show Windows or Space					
Low with light, high with dark color goods.....	10.	to	22.	.....	.....
Silk Mills					
Weaving	5.	to	8.	1.7	0.92
Finishing, warping, winding.....	3.5	to	5.	1.0	0.6
Steel Mills.....	2.	to	4.	0.6	0.4
Streets					
Business (not including light from signs or windows).....	0.4	to	0.8	.....	.....
Country roads.....	0.05	to	0.15	.....	.....
Prominent (in residence district).....	0.2	to	0.4	.....	.....
Residence	0.1	to	0.25	.....	.....
Warehouses	1.5	to	2.	0.45	0.3
Wharfs	1.	to	1.5	.....	.....
Wood Working					
Fine, as carpentering, pattern, furniture making.....	4.	to	6.	1.4	0.8
Rough, as wagon, box, barrel making.....	2.5	to	4.	0.6	0.4
Woolen Mills					
Inspecting, perching.....	8.	to	12.	2.4	1.45
Weaving	5.	to	8.	1.7	0.92
Packing, warping, washing, combing, shipping.....	3.5	to	5.	1.0	0.6
Carding, dyeing, twisting, receiving.....	2.5	to	4.	0.6	0.4
Yards and Industrial Roadways.....	0.15	to	0.6	.....	.....



Lighting for Different Kinds of Service

It is important that a sufficient intensity of light be provided in each class of service. Table No. 1 gives what has been found to be good practice in various industries and classes of service, with regard to the intensity in foot candles to be provided on the working plane. The table also gives the approximate watts per square foot of floor surface necessary to provide the average intensity, when using gas filled or Type "C" Mazda lamps, supported by RLM, standard dome, porcelain enameled ABolites.

For best results it is preferable to use the higher wattage per square foot or even an addition of 20 to 30 per cent, depending on local factors; also to take care of depreciation caused by dirt and dust.

The proportions of the room to be lighted affect considerably the wattage necessary. With a high ceiling, a large amount of wall area absorbs light and a greater wattage is required. In Table No. 1, rooms are considered large when the width is about five times the height and small when the width and height are equal. Proportionate values of wattage per square foot can be taken when the proportions of the room to be lighted are intermediate between the two classes given in the table.

The value of providing a sufficient intensity of the right kind of light, rather than using the low figures in the table, can be appreciated when it is considered that in working near a window around the middle of the day, a workman can see best, because he has 10 to 15 foot candles intensity on the working plane and in a light that is well diffused and does not have sharp shadows.

Tests made in different factories have shown that in many cases, it is real economy to provide an intensity in foot candles even double the higher values given in Table No. 1.

Factors which may permit the use of the lower values of "wattage per square foot" rather than the higher values are:

- Surroundings finished in light color;
- Location where lighting equipment is uniformly kept free from dust and dirt;
- The use of large sized lamps having lower wattage per spherical candlepower.

The figures in Table No. 1 are on the basis of a clear Mazda "C" lamp with the RLM standard dome ABolite reflectors. With the same reflectors but using bowl frosted lamps instead of clear, add about 8 per cent to the watts per square foot. With the same reflectors, but with clear lamps equipped

with opal glass caps, to reduce glare, add about 15 per cent to the watts per square foot.

With large size bowl type reflectors and clear lamps, add 15 to 20 per cent to the watts per square foot given for the clear lamps with dome reflectors.

Mounting Height and Spacing

With the dome or bowl reflectors, Table No. 2 can be used to obtain the maximum distance, which should be allowed between lamp units, in order to obtain uniform illumination.

In laying out a system of lighting, it is best to consider each room or department separately. From Table No. 1, determine how much light should be provided for the work that is to be done in the room. Then obtain the total wattage required by multiplying the chosen watts per square foot, by the total area of the room or section to be lighted.

While it is desirable, from a cost standpoint, to have a minimum number of lamps and outlets, uniform illumination requires that lamp units should not be spaced far apart. They may be spaced further apart when the units are up higher.

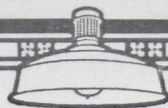
From Table No. 2 can be obtained the distance between units when the mounting height is known. The mounting height is that of the lamp filament. If close to the ceiling, one foot must be allowed as the minimum mounting distance between ceiling or conduit and the center of the lamp filament.

The area to be lighted is considered as divided into squares or rectangles as near square as possible, and a lamp unit figured for the center of each. The number of the squares is determined from the permissible spacing between units. This permits laying out on paper or calculating the number of units or outlets necessary to cover the area. Dividing this number into the total wattage required, will give the wattage per lamp or unit. The nearest regular size of lamp is then taken or better practice would usually lead to the choice of the nearest larger regular size of lamp above this calculated lamp wattage.

Table No. 2

Relation of Mounting Height and Spacing Distance for Lamp and Reflector Units

Mounting Height, Feet Above Floor	Spacing Distance Between Lamps for Uniform Illumination with Standard Dome Reflector Units	Mounting Height, Feet Above Floor	Spacing Distance Between Lamps for Uniform Illumination with Standard Dome Reflector Units
8	9.5 Feet	15	21. Feet
9	11.	16	22.5
10	12.5	18	26.
11	14.5	20	29.
12	16.	22	32.5
13	17.5	24	36.
14	19.		



With bowl type reflectors, the spacing should be about 80 per cent of the distances given in Table No. 2. Bowl type units for General lighting are used with high mounting heights.

Mounting height is that above floor and considering average working plane, $2\frac{1}{2}$ feet above floor.

Where changes are being made in lighting without changing the wiring outlets installed, the space to be lighted from any one lamp is practically fixed. Therefore, the size of lamp needed to provide the wattage necessary to give the light intensity over this area can be readily determined.

In the majority of industrial establishments, up-to-date reflectors with the right sizes of lamps will permit bringing the lighting installation quite well up to modern standards, with little or no change in the wiring or number of outlets.

Local Lighting

In Local lighting, where it is necessary to supplement general lighting, the smaller size Mazda lamps are used with bowl or angle type, porcelain enameled reflectors. They should preferably be mounted high enough so as not to be in the way of the workman and so that in his normal position, the lighting source should be above and behind him. The amount of Local lighting should be kept down to a minimum. The use of small lamps mounted close to the working plane and where small areas are to be kept bright, is often economical in energy consumption.

Elimination of Glare

In all artificial lighting, effort must be made to obtain uniform illumination with efficiency and minimum amount of glare. Glare causes eye strain or fatigue, as well as accidents and the other factors that go with insufficient illumination. Direct glare results from a brilliant light source in the direct line of vision and reflected glare is caused by bright rays of light reflected from such surfaces as bright metals, liquids, glass, etc. Direct glare can be corrected by shielding the lamp filament from the normal line of vision or mounting the unit relatively high above the working plane. By diffusing or softening the light, both direct and reflected glare can be reduced. Therefore correct reflectors are necessary not only to direct a sufficient light upon the working plane, but also to protect from the harmful effects of the glare.

Reflector units should be mounted as high as practical where ceilings are low. With low ceilings the higher candlepower lamps should not be

used. With high ceilings, bowl type reflectors further protecting the lamp filament from direct view, may be desirable.

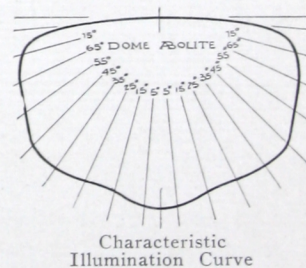
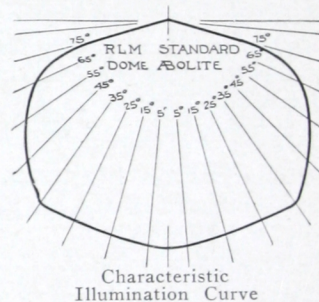
The use of bowl frosted lamps with standard reflectors gives good protection against glare, with little additional expense and without requiring maintenance of any additional reflector parts. The most simple form of lighting unit usually proves the best in industrial service.

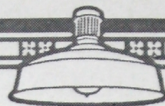
Where further diffusion is desirable, opal glass caps may be used over the lower portion of the lamp bulb. Glass has the desirable characteristic of being readily cleaned. As before stated, about 15 per cent more wattage is required than with clear lamp.

With ABolite reflector equipment, the best results are obtained through the proper balance between efficiency in providing light, reduction of glare and the low maintenance cost. The regularly listed types of ABolite reflectors are as follows:

Dome or Distributing Type

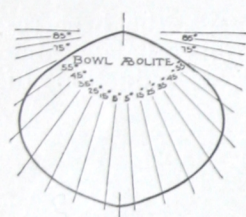
The RLM Standard Dome ABolites are reflectors with proper balance in design to give correct and efficient service for the majority of classes of general lighting. These represent standardization in specifications for size, depth and design of reflectors for type "C" incandescent lamps, developed by the Reflector and Lamp Manufacturers. With the dome type reflectors, there is a relatively wide distribution of light as shown in the typical distribution curves. The depth of the RLM Standard dome is such (angle of cut-off to lamp filament is $17\frac{1}{2}$ degrees) that good protection from glare from the lamp filament is provided when the reflector unit is mounted at the average mounting height and yet providing the necessary light with a low maintenance cost. The large reflecting surfaces distribute the light so that most of the glare that might be objectionable, is eliminated and an adequate amount of diffusion is obtained.





This RLM Standard dome type of reflector has the most general application. It is also well adapted to replace reflectors now installed, which do not have the proper depth or angle of cut-off to guard against glare from modern lamps.

The regular dome Abolites are still recommended for all general illumination with lamps up to and including the 60 watt size. For 75 watt and larger (Mazda "C") lamps the regular dome Abolites are desirable for indoor service when the lighting units are mounted well above the normal vision, as in storage warehouses, freight sheds, etc. They are well adapted for lighting general exteriors such as railway yards and platforms, docks, etc.



Bowl Type

Bowl type Abolites have the lamp filament shielded to a greater angle below horizontal and the light is concentrated more over limited areas. The smaller sizes of bowl type reflectors are especially suited for Local lighting when high intensities on limited areas are wanted or where low wattage lamps are to be used, mounted close to the working plane.

The larger sizes of bowl reflectors, with larger lamps are also well suitable for illuminating large areas when high mounting heights are possible. With the same mounting height, the bowl reflector units must be spaced closer than dome reflectors.

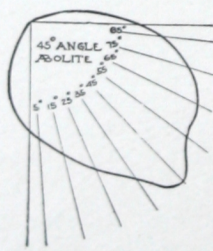
The larger sizes of bowl reflectors, with larger lamps are also well suitable for illuminating large areas when high mounting heights are possible. With the same mounting height, the bowl reflector units must be spaced closer than dome reflectors.

Angle Type

The angle type Abolites, also known as diagonal type, are for use where the lamps are not suspended directly over the area to be illuminated. In the larger sizes, they are used in industries where illumination is built up from the sides. Angle reflectors can be mounted along the side walls below cranes, directing the light towards the center of the room. Such light can be directed from each side so that shadows are softened.

The smaller sizes are also regularly used in local lighting, often permitting more convenient mounting of the lamp than if the small bowl type reflectors were used.

Angle reflectors are also used for various special



Characteristic Illumination Curve

illumination service, such as sign and billboard lighting, protective or flood lighting, effective concentration of light on samples or demonstrations in show rooms, lighting of athletic fields and drill grounds, etc.

Special Service Reflectors

Abolites are also regularly made for installations in industries where special precautions are necessary because of inflammable vapors or acid fumes.

For store front, and general outside illumination, reflector units with diffusing glassware are available.

For street lighting fixtures and series, constant current or constant potential transformer equipment, data on standard A-B material may be obtained.

ABOLITE REFLECTOR EQUIPMENT

Reflector Construction

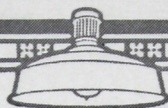
Abolite reflectors are all made of high grade drawn steel with porcelain enamel finish. The reflectors are all formed to uniform dimensions with mechanical designs that give strength and rigidity.

It has been proved that for every class of industry where metal reflectors are suited, the porcelain enameled steel reflectors are best and most economical because they can be maintained satisfactorily for every operating condition.

Finish

The vitreous enamel fired on the Abolite surface has characteristics most suitable for light reflection, uniformity and service durability. Abolites are all porcelain enameled in the A-B Company's own porcelain enameling plant. This A-B enamel finish has been proved to be exceptionally uniform in structure and finish as well as relatively free from cracking trouble. It can be readily maintained in its original bright condition. The A-B enamel has a high reflecting efficiency.

Abolites have consistently been furnished only with this type of fire enameled reflecting surface. The value of maintaining good illumination practically always warrants the use of the porcelain enameled reflectors rather than paint enamel or other reflecting surfaces. Reflectors must be cleaned periodically. Dust and dirt reduce the reflecting power very rapidly. Dirty reflectors are very uneconomical. Therefore the reflecting sur-



face must be one that can be easily and repeatedly washed and without depreciation to its reflecting quality. Only smooth glass and vitreous or porcelain enamel reflecting surfaces have these necessary qualities; further the porcelain enameled steel reflector is not subject to breakage like the glass units nor to discoloring with heat like the mirrored glass reflectors.

The standard outside finish of ABolites is Royal Blue enamel and White enamel on the reflecting surface; which gives a neat appearance, whether on shelf or in service. Reflectors can be furnished with white, green or other finishes on outside surface, when so ordered from the factory, but the standard finish will be found more satisfactory in most installations.

Universal Holder Socket

The ABolite holder socket, providing a metal reflector support and lamp socket, can be interchangeably used on dome, bowl and angle ABolites of various sizes. The holder socket consists of a porcelain enameled steel shell or cup having welded, corrugated sides and carrying a porcelain lamp receptacle. The corrugated sides are open at the top and bottom to permit a free passage of cold air from above the reflector and around the entire circumference of the shell, while the corrugations materially increase the radiating surface of the shell.

The ABolite lamp socket is a two piece porcelain socket. The porcelain lamp receptacle is attached to a rugged casting which is threaded directly to the conduit and held to the steel shell by a sherardized nut clamped on an insulating washer.

The bottom portion of the porcelain receptacle is easily detached by taking out one screw, so that the unit can be very readily wired and the method of wiring is exactly the same as that used on the best known commercial porcelain sockets. The bottom receptacle is interchangeable with pull chain and lock socket receptacles of the same make.

The ABolite holder socket reflectors are furnished in both two piece and one piece types. With the two piece type, the reflector is readily attached to the holder socket and held firmly and correctly in position by a copper-clad steel spring keeping the reflector in the proper position, or, if furnished in the one piece unit, has the same holder socket and reflector but rigidly united by electrical welding.

With the spring method of clamping the ABolite reflector to its holder, the lamp is readily placed in the correct position, whereas there may be some difficulty in doing this with the screw method of clamping to the holder.

The two piece type has the largest application on account of its flexibility and also because the reflector unit can be so easily taken down, where it can be given a thorough cleaning. This ease in washing is of especial value in industries where reflectors get very dirty, for example, railroad round-houses, etc.

The one piece unit is adapted for installations where there is vibration or outdoor service where wind pressure, must be met.

ABolite holder socket reflectors insure permanent efficiency. The reflectors are readily cleaned. The holder sockets are entirely interchangeable and reflectors of different types or sizes may be substituted at any time without changing the electrical installation. Reflectors for medium base or large base lamps may be interchanged, as the same holder socket is fitted for both the medium base or large base receptacles.

Shade Holders

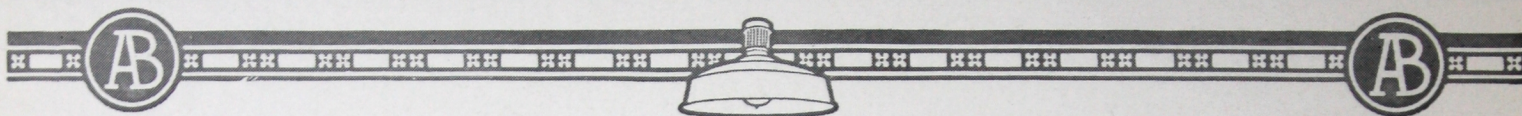
ABolites are furnished with strong enameled steel shadeholders for attaching to brass shell or porcelain and weatherproof sockets. The reflectors are the same as and are interchangeable with the two piece holder socket reflectors. The reflectors are held firmly in position by the shade holder readily attached to the socket. Like the holder sockets, these shade holders are interchangeable on dome, bowl or angle ABolites.

RLM standard dome ABolites are also listed with a standard heel to fit $2\frac{1}{4}$ inch commercial shade holders where these may be considered desirable to match with equipment already installed.

Mounting

The holder sockets can be readily attached to $\frac{1}{2}$ inch conduit or reducers furnished whereby they can be attached to $\frac{3}{8}$ inch conduit. Porcelain bushings are furnished where they are to be mounted on reinforced drop cord.

ABolites are consistently mechanically correct; easily wired and quickly installed; easy to maintain in their original efficient condition.

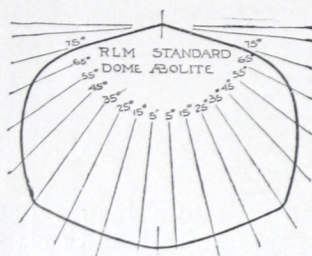


INDUSTRIAL ABOLITES

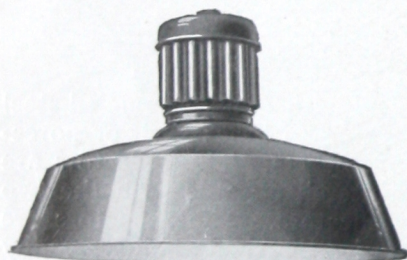
Porcelain Enameled Steel

R L M STANDARD DOME REFLECTORS

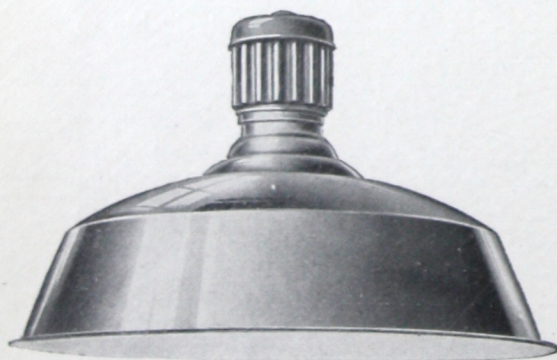
(Reflector and Lamp Manufacturers' Standard)



Characteristic Distribution Curve
RLM Standard Dome ABolite



14" RLM Standard
Dome ABolite



18" RLM Standard
Dome ABolite

HOLDER SOCKET TYPE

A-B Catalog No.	R L M Standard Designation (Plus Holder)	For Mazda Lamp Size Watts	Net Diameter Inches	Standard Quantity	Approx. Shipping Wt. in Lbs. (Std. Quan.)	List Price Each
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TWO-PIECE

G-905	Dome 75	75	12	25	80	\$3.40
G-907	Dome 100	100-150	14	25	95	3.70
G-909	Dome 200	200	16	25	130	4.40
*G-911	Dome 500	300-400-500	18	20	125	5.30
*G-913	Dome 1000	750-1000	20	20	200	7.30

ONE-PIECE

G-906	Dome 75	75	12	25	85	3.60
G-908	Dome 100	100-150	14	25	100	3.90
G-910	Dome 200	200	16	25	140	4.60
*G-912	Dome 500	300-400-500	18	20	135	5.50
*G-914	Dome 1000	750-1000	20	20	225	7.60

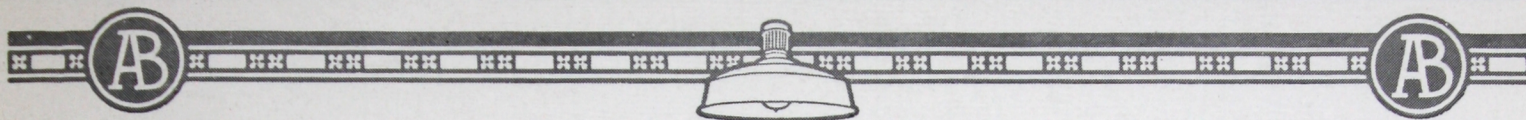
(1) Large base receptacle. Other ABolites with large base receptacle \$0.75 list extra.

(2) ABolite Holder Sockets are tapped for standard 1/2" threaded pipe or conduit; 3/8" will be furnished when specified, at same list price.

(3) When ABolites such as G-911, G-912, etc., regularly listed with large base receptacle, are ordered with small base receptacle, deduct \$0.60 from list.

(4) When ABolite reflectors only, without holder sockets are desired, deduct from list (2 piece type): holder sockets with large base receptacle, \$1.40 list. Same standard quantities as complete ABolites. For 12", 14", 16" reflectors only, see page 11.

(5) FITTINGS: For extension tube and canopy, gooseneck holder, glass caps, glare shields, see pages 17 and 18; for holder sockets, see page 16.



INDUSTRIAL ABOLITES

Porcelain Enameled Steel

R L M STANDARD DOME REFLECTORS

(Reflector and Lamp Manufacturers' Standard)

SHADE HOLDER TYPE

A-B Catalog No.	R L M Standard Designation	For Mazda Lamp Size Watts	Net Diameter Inches	Standard Quantity	Approx. Shipping Wt. in Lbs. (Std. Quan.)	List Price Each
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WITH AB SHADE HOLDER (G-447) FOR BRASS SOCKETS

G-915	Dome 75	75	12	25	60	\$2.25
G-917	Dome 100	100-150	14	25	75	2.60
G-919	Dome 200	200	16	25	95	3.05

WITH AB SHADE HOLDER (G-892) FOR PORCELAIN OR WEATHERPROOF SOCKETS

G-916	Dome 75	75	12	25	60	2.30
G-918	Dome 100	100-150	14	25	75	2.65
G-920	Dome 200	200	16	25	95	3.10

WITH HEEL FOR USE WITH STANDARD 2 1/4" SHADE HOLDERS

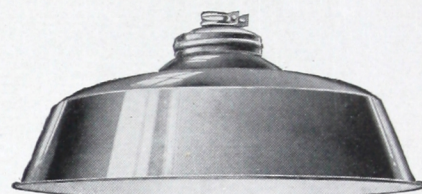
G-921	Dome 75	75	12	25	60	2.15
G-922	Dome 100	100-150	14	25	75	2.50
G-923	Dome 200	200	16	25	95	2.90
*G-924	Dome 500	300-400-500	18	20	125	3.90

*(1) For 3 1/4" shade holder.

(2) When reflectors listed with AB shade holders are ordered without the shade holders, deduct \$0.15 list for G-447 or \$0.20 list for G-892. Same standard quantities as complete ABolites.

(3) The A-B shade holders, for use on standard base sockets, will be found more satisfactory for most installations than the heel type held to commercial holders with screws.

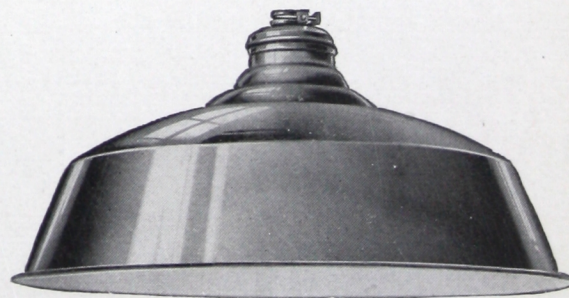
(4) For shade holders, see page 16.



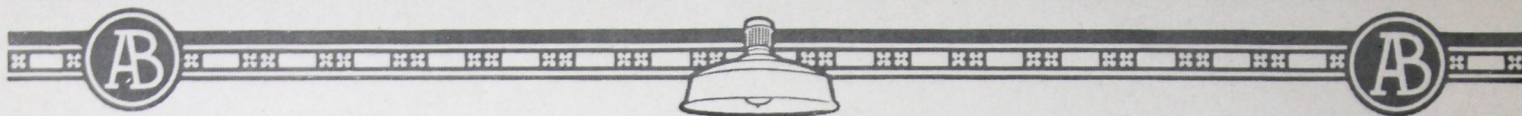
14" RLM Standard Dome ABolite
with A-B Shade Holder



14" RLM Standard Dome ABolite
with Heel



16" RLM Standard Dome ABolite
with A-B Shade Holder

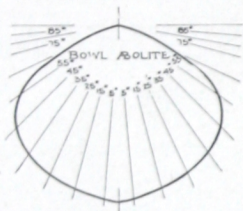


INDUSTRIAL ABOLITES

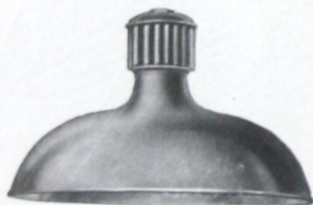
Porcelain Enameled Steel BOWL ABOLITE REFLECTORS



G-807 ABolite



Characteristic Distribution Curve
Bowl ABolite



G-809 ABolite



Bowl ABolite with Holder for
Brass Shell Socket
"H" Position

HOLDER SOCKET TYPE

Catalog No.	TYPE	For Mazda Lamp Size Watts	Standard Quantity	Approx. Shipping Wt. in Lbs., Std. Quan.	List Price Each
TWO-PIECE					
G-806	7" Bowl	25 to 60	40	65	\$2.15
G-807	9" Bowl	75-100	40	110	2.45
G-808	10" Bowl	100-150-200	40	140	3.50
*G-809	16" Bowl	300-400-500	20	160	4.60

ONE-PIECE

*G-810	16" Bowl	300-400-500	20	170	\$4.65
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(1) Large base receptacle. Other ABolites with large base receptacle, \$0.75 list extra.

(2) ABolite Holder Sockets are tapped for standard 1/2" threaded pipe or conduit; 3/8" will be furnished, when specified, at same list price.

(3) When ABolites such as G-809, G-810, etc., regularly listed with large base receptacles are ordered with small base receptacles, deduct \$0.60 list.

(4) When ABolite reflectors only, without holder sockets, are desired, deduct from list: holder sockets with large base receptacles, \$1.40 list. Same standard quantities as for complete ABolites. For 7", 9" and 10" bowl reflectors only, see below.

(5) FITTINGS: For extension tube and canopy, gooseneck holder, glass caps, see pages 17 and 18; for holder sockets, see page 16.

(6) One Piece Types: the 7", 9" and 10" holder socket bowl ABolites can be furnished in one piece type on special order.

SHADE HOLDER TYPE

List Prices Cover Reflector and Shade Holder

Catalog		TYPE	For Mazda Lamp Size Watts	Standard Quantity	Approx. Shipping Wt. in Lbs., Std. Quan.	List Price Each
With "H" Holder	With "O" Holder					
G-461	G-462	7" Bowl	25 to 60	40	50	\$1.10
G-465	G-466	9" Bowl	75-100	40	90	1.60
G-467	G-468	10" Bowl	100-150-200	40	110	2.70

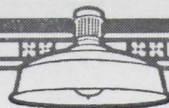
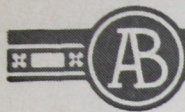
(1) HOLDERS FOR PORCELAIN SOCKETS.—When above are ordered with sub-letters WP, steel, spring clamp, shade holders, G-892 or G-600, suitable for weatherproof and porcelain sockets, will be furnished, with an addition of \$0.05 each to list; (Example: G-465 WP, list price \$1.65).

(2) The "H" or high position holder gives the standard position. The "O" or low holder lowers the lamp filament position in the reflector.

(3) When bowl reflectors only are ordered, without shade holders, deduct \$0.15 from list of shade holder type.

(4) For shade holders, see page 16.

The reflectors are the same as used in G-806, G-807, G-808 Holder Socket ABolites.



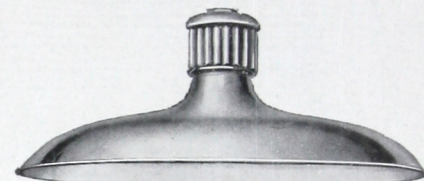
INDUSTRIAL ABOLITES

Porcelain Enameled Steel

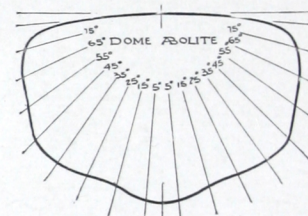
SHALLOW DOME ABOLITE REFLECTORS

HOLDER SOCKET TYPE

Catalog No.	TYPE	For Mazda Lamp Size Watts	Standard Quantity	Approx. Shipping Wt. in Lbs., Std. Quan.	List Price Each
TWO-PIECE					
G-811	14" Dome	75-100-150	25	80	\$2.90
G-812	18" Dome	150-200	25	135	3.70
*G-813	20" Dome	300-400-500	20	210	4.60
ONE-PIECE					
G-814	14" Dome	75-100	25	80	3.00
G-815	18" Dome	150-200	25	135	3.80
*G-816	20" Dome	300-400-500	20	210	4.70



G-811 ABolite



Characteristic Distribution Curve
Dome ABolite

(1) Large base receptacle. Other ABolites with large receptacle, \$0.75 list extra.

(2) ABolite Holder Sockets are tapped for standard $\frac{1}{2}$ " threaded pipe or conduit; $\frac{3}{8}$ " will be furnished, when specified, at same list price.

(3) When ABolites such as G-813, G-816, etc., regularly listed with large base receptacles, are ordered with small base receptacles, deduct \$0.60 list.

(4) When ABolite reflectors only without holder sockets are desired, deduct from list: holder sockets with large base receptacles, \$1.40 list. Same standard quantities as for complete ABolites. For 14" and 18" dome reflectors only, see below.

(5) FITTINGS: For extension tube and canopy, gooseneck holder, glass caps, glare shields, see pages 17 and 18; for holder sockets, see page 16.

(6) 10" and 12" shallow dome can be furnished with holder socket in either two piece or one piece types, on special order.

SHADE HOLDER TYPE

List Prices Cover Reflector and Shade Holder

Catalog No.		TYPE	For Mazda Lamp Size Watts	Standard Quantity	Approx. Shipping Wt. in Lbs., Std. Quan.	List Price Each
With "H" Holder	With "O" Holder					
G-470	G-471	10" Dome	25-40-50	40	85	\$1.10
G-472	G-473	12" Dome	25-40-50-60	40	105	1.40
G-474	G-475	14" Dome	75-100-150	25	65	2.20
G-476	G-477	18" Dome	150-200	25	80	3.00

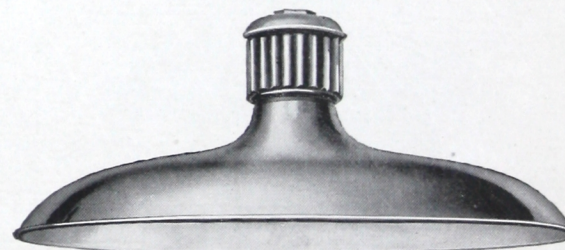
(1) HOLDERS FOR PORCELAIN SOCKETS.—When above are ordered with subletters WP, steel spring clamp shade holders, G-892 or G-600, suitable for weatherproof and porcelain sockets, will be furnished, with an addition of \$0.05 each to list. (Example: G-474 WP, list price \$2.25).

(2) The "H" or high position holder gives the standard distributing position for these reflectors. The "O" or low holder lowers the lamp filament in the reflector.

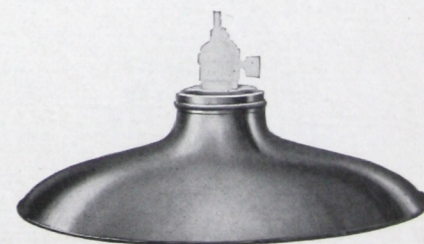
(3) When dome reflectors only, without shade holders are ordered, deduct \$0.15 from list of shade holder type.

(4) For shade holders, see page 16.

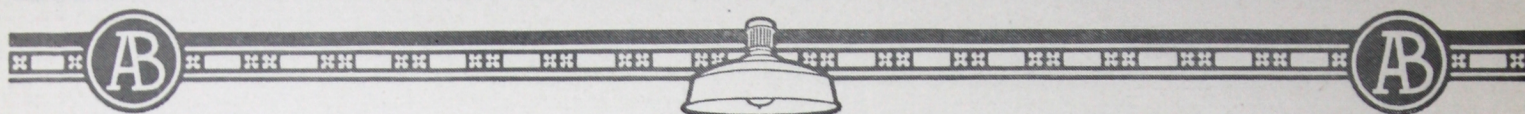
The reflectors are the same as used in G-811, G-812, G-813 Holder Socket ABolites.



G-813 ABolite



12" Dome ABolite with "O"
Position Holder attached to
Brass Shell Socket



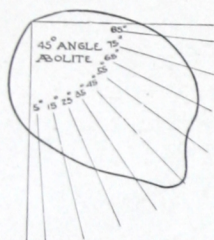
INDUSTRIAL ABOLITES

Porcelain Enameled Steel
ANGLE ABOLITE REFLECTORS

HOLDER SOCKET TYPE



9" Angle ABolite



Characteristic Distribution Curve
45° Angle ABolite



16" Angle ABolite



9" Angle ABolite with Shade Holder

Catalog No.	Angle Degrees	TYPE	For Mazda Lamp Size Watts	Standard Quantity	Approx. Shipping Wt. in Lbs., Std. Quan.	List Price Each
G-818	45°	7" Angle	25-40-50-60	40	60	\$2.30
G-817	30°	7" Angle	25-40-50-60	40	60	2.30
G-820	45°	9" Angle	60-75-100	30	80	2.90
G-819	30°	9" Angle	60-75-100	30	80	2.90
G-822	45°	12" Angle	150-200	20	80	4.10
G-821	30°	12" Angle	150-200	20	80	4.10
*G-824	45°	16" Angle	300-400-500	20	125	5.30
*G-823	30°	16" Angle	300-400-500	20	125	5.30

(1) Large Base Receptacle. Other ABolites with large base receptacle, \$0.75 list extra.

(2) Angle ABolites G-817, G-818, G-819 and G-820 are two piece; G-821, G-822, G-823 and G-824 are one piece.

(3) ABolite Holder Sockets are tapped for standard 1/2" threaded pipe or conduit; 3/8" will be furnished, when specified, at same price.

(4) The 45° Angle is more standard than the 30° Angle and is recommended for general service.

(5) When ABolites G-823-824, listed with large base receptacle, are ordered with small base receptacle, deduct \$0.60 from list.

(6) FITTINGS: For extension tube and canopy, gooseneck holder, etc., see pages 17 and 18; for holder sockets, see page 16.

SHADE HOLDER TYPE

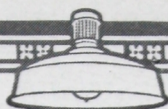
Catalog No.	Angle Degrees	TYPE	For Mazda Lamp Size Watts	Standard Quantity	Approx. Shipping Wt. in Lbs., Std. Quan.	List Price Each
G-543	45°	7" Angle	25-40-50-60	40	60	\$1.70
G-540	30°	7" Angle	25-40-50-60	40	60	1.70
G-544	45°	9" Angle	75-100	40	85	2.10
G-541	30°	9" Angle	75-100	40	85	2.10
G-545	45°	12" Angle	150-200	30	160	3.10
G-542	30°	12" Angle	150-200	30	160	3.10

(1) HOLDERS FOR PORCELAIN SOCKETS.—When above are ordered with sub-letters WP, steel, spring clamp, shade holder G-892, suitable for weather-proof and porcelain sockets will be furnished with an addition of \$0.05 each to list.

(2) When angle reflectors only are ordered, without shade holders, deduct \$0.15 from list of shade holder type.

(3) The reflectors are the same as used in the two-piece holder socket ABolites.

(4) For shade holders, see page 16.



INDUSTRIAL ABOLITES

Porcelain Enameled Steel

For 750 and 1000 Watt Type Mazda Lamps

HOLDER SOCKET TYPE

Catalog No.	Description	For Mazda Lamp Size Watts	Standard Quantity	List Price Each
G-665	16" Deep Bowl	750-1000	10	\$7.90
G-666	20" Deep Dome	750-1000	10	7.90



G-665 ABolite

The ABolites G-665, G-666 use a ventilated holder socket G-681. Tapped for standard $\frac{1}{2}$ " pipe or conduit. Fitted with large base receptacle.

GLOBE FITTER ABOLITES

These ABolites are neat weatherproof units of copper with diffusing globe, suitable for all types of street front, boulevard, yard and similar lighting with large Mazda "C" lamps.

Catalog No.	Description	For Mazda Lamp Size Watts	Standard Quantity	List Price Each
G-740	6" Globe Fitter with 10" x 6" Ball Globe 5288	200	10	\$4.60
G-741-A	6" Globe Fitter with 10" x 6" Ball Globe 5288	300-400-500	10	5.20

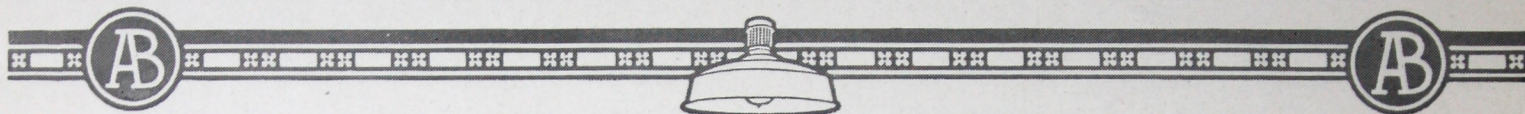


G-666 ABolite

These ABolites tapped for standard $\frac{1}{2}$ " pipe or conduit. G-740 fitted with small base receptacle and G-741A with large base receptacle. Information on other globe fitter units upon application.



G-740 ABolite



INDUSTRIAL ABOLITES

HOLDER SOCKETS, SHADE HOLDERS AND LOCKING SOCKETS

For Use with Standard Abolite Reflectors

HOLDER SOCKETS

Catalog No.	Description or Type	Standard Quantity	List Price Each
G-716	With small base receptacle	40	\$1.45
G-720	With large base receptacle	40	1.90
G-925	Lock Socket Type, with small base receptacle	40	2.30



The A-B Receptacle and Top as in Holder Socket G-716

A-B SHADE HOLDERS

Catalog No.	Position	Type of Socket	Standard Quantity	List Price Each
G-447	High	Brass	50	\$.25
G-450	Low	Brass	50	.25
G-892	High	Porcelain or Weatherproof	50	.30
G-600	Low	Porcelain or Weatherproof	50	.30



Lock Socket Receptacle for G-925

(1) Holder sockets and shade holders are of size to fit standard two-piece type reflectors as listed on pages 10 to 14, except those listed with heel for 2¼" or 3¼" shade holders.

LOCKING HOLDER SOCKETS

The ABolite locking holder socket has the "Shurlock" type of porcelain receptacle, mounted in ventilated cup holder. The key is inserted through a round opening in the side of the holder.

Any Standard Holder Socket ABolite, with small base receptacle, as listed on pages 10 to 14; will be furnished with locking type, holder socket, by ordering "Lock Socket" Type or adding initials L. S., for example G-907LS; addition to list price of \$0.80 each on two piece ABolites and \$1.00 each on one piece ABolites.

Keys for AB lock socket are 40 cents each net, sold only with similar precautions as used with other "Shurlock" locking keys.

PULL CHAIN SOCKETS

Holder socket G-716 can be furnished with a standard pull chain, brass shell receptacle, attached to the special AB porcelain base.

List price of such standard small base receptacle holder socket complete with pull chain is \$1.60 each. Standard quantity is 40. Order as G-716 PC or G-716 with Pull Chain.

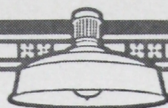
Any standard Holder Socket ABolite, with small base receptacle, as listed on pages 9 to 13, will be furnished with pull chain brass shell socket, by ordering "Pull Chain" Type or adding initials P.C., for example, G-907P.C.; addition to list price of \$0.20 each on two piece or one piece ABolites.

Extra length chains and insulated chains for the pull chain holder sockets can be furnished.

The "Shurlock" locking socket can also be furnished with the pull chain brass shell holder socket.



Pull Chain Receptacle for A-B Holder Sockets



INDUSTRIAL ABOLITES

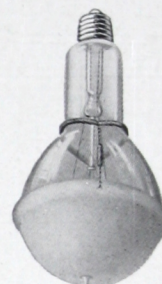
ACCESSORIES AND FITTINGS

OPAL GLASS LAMP CAPS

Made of a high grade opal glass having excellent diffusion with low absorption of light. The cap hides the lamp filament and further cuts down glare. The caps are especially fitted for use with reflectors that would not give sufficient eye protection.

The cap is held in position by coiled spring holders so that cap closely fits the bulb of Mazda "C" lamps.

Catalog Designation	For Mazda Lamp Size Watts	Standard Quantity	List Price Each
GC- 75	75	50	\$0.95
GC-100	100-150	50	1.00
GC-200	200	40	1.06
GC-300	300	30	1.22
GC-500	400-500	30	1.45



Type "C" Lamp with
A-B Opal Cap

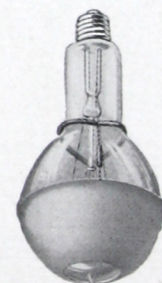


Opal Cap for
100 Watt Lamp

A-B GLARE SHIELDS

The A-B Glare Shield is made of white porcelain enameled steel to conform to lamp bulb and held in position by coiled spring holder, same as the opal glass lamp caps. These shields are very useful with flat and shallow dome reflectors to protect the eye from the lamp filament. The porcelain enameled steel is easily cleaned, does not break when dropped, and will give a long useful life wherever such additional protection from glare is desirable.

Catalog Designation	For Mazda Lamp Size Watts	Standard Quantity	List Price Each
GS-100	100-150	40	\$0.95
GS-200	200	40	1.00
GS-300	300	30	1.20
GS-500	400-500	30	1.30

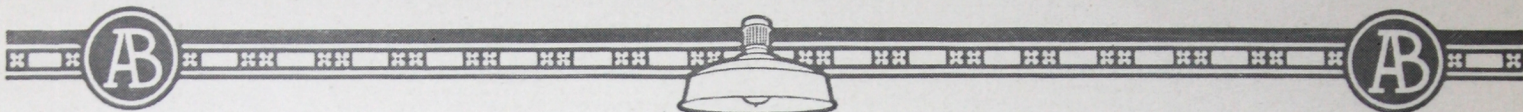


Type "C" Lamp
with A-B Glare Shield



A-B Glare Shield
for 200 Watt Lamp

Prices cover opal glass caps or steel glare shields with holder only.



INDUSTRIAL ABOLITES

ACCESSORIES AND FITTINGS

FITTINGS.



G-497 Extension
Tube and Canopy

Catalog No.	Description	List Prices
G-497	—EXTENSION TUBE and CANOPY, 12" long.....\$ (Standard Quantity 30) For tubes over 12", add \$0.18 list for each 6" length or fraction thereof.	1.00 each
G-925	—3-Foot GOOSENECK of 1/2" pipe, paint enameled, with wall flange or pole-plate..... (Standard Quantity 40)	1.30 each

SUSPENSION EYE RINGS

5518	—Eye Rings (large eye) for hanging ABolites, 3/4" left- hand Pipe Thread	\$ 30.00 per 100
G-435	—Eye Rings for hanging ABolites, 3/8" Pipe Thread.....	20.00 "
G-612	—Eye Rings for hanging ABolites, 1/2" Pipe Thread..... (Standard quantity for Eye Rings is 100.)	20.00 "

CORD BUSHINGS

G-72	—Porcelain cord bushing for ABolites with 3/8" pipe tap..\$	7.00 per 100
G-83-A	—Porcelain cord bushing, for ABolites, with 1/2" pipe tap.. (Standard quantity for Bushings is 100)	9.00 "

DETAIL PARTS

G-926	—Small base receptacle (present type).....	\$ 75.00 per 100
G-927	—Large base receptacle (present type).....	120.00 "
5069	—Lock nuts on holder socket.....	11.00 "
5463	—Packing washer	1.00 "
G-825	—Old style small base receptacle.....	75.00 "
G-826	—Old style large base receptacle..... (Old style, G-825, G-826, superseded in 1919) (Standard Quantity for detail parts is 100)	120.00 "



Gooseneck with Bracket

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CCA



Adams-Bagnall Electric Company
Cleveland, Ohio

Manufacturers of Electrical Apparatus of Merit;
including Lighting and Power Transformers,
Constant Current Transformers, Lighting
Fixtures, Electric Gyrofans, etc.

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CCA

